

MULTI-ARM BLOCK COPOLYMERS AS DRUG DELIVERY VEHICLES

ABSTRACT OF THE DISCLOSURE

The invention provides multi-arm block copolymers useful as drug delivery vehicles comprising a central core molecule, such as a residue of a polyol, and at least three copolymer arms covalently attached to the central core molecule, each copolymer arm comprising an inner hydrophobic polymer segment covalently attached to the central core molecule and an outer hydrophilic polymer segment covalently attached to the hydrophobic polymer segment, wherein the central core molecule and the hydrophobic polymer segment define a hydrophobic core region. The solubility of hydrophobic biologically active agents can be improved by entrapment within the hydrophobic core region of the block copolymer. The invention further includes pharmaceutical compositions including such block copolymers, methods of making such copolymers and pharmaceutical compositions, and methods of using the block copolymers as drug delivery vehicles.